

EXHIBIT A

Thereasa A. Rich, MS, CGC

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Summary

Genetic counselor with 15+ years in cancer genetics. Experience in direct patient care, teaching, clinical research, commercial laboratory medical support, and companion diagnostics.

Experience

Senior Medical Science Liaison

Guardant Health

Redwood City, CA (June 2017 – Present)

- Engage academic key opinion leaders to promote understanding of the technical aspects and clinical value of Guardant Health's cell free DNA testing products
- Contribute to clinical studies and publications, including development of strategic research collaborations
- Support multiple departments by providing clinical and scientific expertise

Regional Medical Specialist

Myriad Genetic Laboratories

Salt Lake City, UT (May 2014 – June 2017)

- Provided clinical education on the identification and management of hereditary cancer syndromes, personalized medicine products (MyRisk, MyChoice HRD, BRACAnalysis CDx, EndoPredict), and technical aspects of molecular genetic testing.
- Collaborated with sales, marketing, the oncology business unit, and managed care teams to support company strategies to increase awareness of and access to Myriad products

Genetic Counselor

The University of Texas MD Anderson Cancer Center

Houston, TX (May 2006-April 2014)

- Provided clinical genetic counseling to patients with or at risk for a wide range of hereditary cancer syndromes. Developed high risk screening clinics.
- Gave more than 20 invited lectures as a subject matter expert in hereditary endocrinopathies. Participated in training of endocrinology and surgical oncology fellows and genetic counseling students.
- Served as principle investigator or co-investigator on 11 protocols and chaired or co-chaired 3 student thesis projects. Assisted with grant writing and funding acquisition including working with potential donors, database development, and data management, analysis, and presentation.

Accomplishments

- Awarded 2016 Regional Medical Specialist of the Year, Myriad Genetic Laboratories
- Designed two funded research protocols
- >40 peer-reviewed publications, eight as first author
- Author or co-author of >20 abstract presentations at major national and international societal meetings, one of which was awarded Best Abstract of the Year at the 2011 meeting of the American Association of Endocrine Surgeons

Education

The University of Michigan (Ann Arbor, MI)

Master of Science, Human Genetics, Genetic Counseling Program
2004 – 2006

The Pennsylvania State University (State College, PA)

Bachelor of Science, Biochemistry & Molecular Biology
2000 – 2004

Other Professional Activity

- Diplomat, American Board of Genetic Counseling (ABGC), 2007-present
- National Society of Genetic Counselors (NSGC) Annual Education Conference Abstract Workgroup member (2014-2016)
- Item writer, ABGC (2013-2016)
- Recorder Assistant, The American Association of Endocrine Surgeons (2006-2012)
 - Coordinated peer review of manuscripts presented at the annual meeting
 - Facilitated communication of required revisions between author, journal and editors
 - Assisted in final preparation of manuscripts for publication in *Surgery*
- Co-chair, NSGC Cancer Genetics Special Interest Group, subcommittee on research (2009-2011)
- Member:
 - NSGC and NSGC Cancer Genetics Special Interest Group (2006- present)
 - Texas Society of Genetic Counselors (2006-2014)
 - Colorado Genetic Counseling Network (2014-present)

Publications:

Vidual N, **Rich TA**, Sartor O, et al. Routine plasma-based genotyping to comprehensively detect germline, somatic, and reversion *BRCA* mutations among patients with advanced solid tumors. *Clin Cancer Res* 26(11):2546-2555 (2020).

Clifton K, Luo J, Tao Y, Saam J, **Rich T**, et al. Mutation profile differences in younger and older patients with advanced breast cancer using circulating tumor DNA (ctDNA). *Breast Cancer Res Treat* 185(3):639-646 (2021).

Reckamp KL, Patil T, Kirtane K, **Rich TA**, et al. Duration of targeted therapy in patients with advanced non-small cell lung cancer identified by circulating tumor DNA analysis. *Clin Lung Cancer* 21(6):545-552 (2020).

Clifton K, **Rich TA**, Parseghian C, et al. Identification of actionable fusions as and anti-EGFR resistance mechanisms using a circulating tumor DNA assay. *JCO Precis Oncol* 3:PO.10.00141 (2019).

Rich TA, Reckamp KL, Chae YL et al. Analysis of cell-free DNA from 32,989 advanced cancers reveals novel co-occurring activating *RET* alterations and oncogenic signaling pathway aberrations. *Clin Cancer Res* 25(19): 5832-5842 (2019).

Hyde SM, **Rich TA**, Waguespack SG, Perrier ND, Hu MI. CDC73-Related Disorders. 2008 Dec 31 [updated 2018 Apr 26]. In: Adam MP, Ardinger HH, Pagon RA, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2021. Available from <https://www.ncbi.nlm.nih.gov/books/NBK3789/>.

Romero Arenas MA, **Rich TA**, Hyde SM et al. Recontacting patients with updated genetic testing recommendations for medullary thyroid carcinoma and pheochromocytoma or paraganglioma. *Ann Surg Oncol* 25(5):1395-1402 (2018).

Long KL, Etzel C, **Rich T**, et al. All in the family? Analyzing the impact of family history in addition to genotype on medullary thyroid carcinoma aggressiveness in MEN2A patients. *Fam Cancer* 16(2):283-289 (2017).

Xu JY, Grubbs EG, Waguespack SG, Jimenez C, Gagel RF, Sosa JA, Sellin RV, Dadu R, Hu MI, Trotter CS, Jackson M, **Rich TA**, et al. Medullary Thyroid Carcinoma Associated with Germline RET K666N Mutation. *Thyroid* 26(12):1744-1751 (2016).

Rich T, Jackson M, Roman-Gonzalez A, et al. Metastatic sympathetic paraganglioma in a patient with loss of the SDHC gene. *Fam Cancer* 14(4):615-9 (2015).

Romero Arenas MA, Fowler RG, San Lucas FA, Shen J, **Rich TA**, et al. Preliminary whole-exome sequencing reveals mutations that imply common tumorigenicity pathways in multiple endocrine neoplasia type 1 patients. *Surgery* 156(6):1351-7 (2014); discussion 1357-8.

Rich TA, Woodson AH, Litton J, Arun B. Hereditary breast cancer syndromes and genetic testing. *J Surg Oncol* 111(1):66-80 (2015).

Romero Arenas MA, Morris LF, **Rich TA**, et al. Preoperative multiple endocrine neoplasia type 1 diagnosis improves the surgical outcomes of pediatric patients with primary hyperparathyroidism. *J Pediatr Surg* 49(4):546-50 (2014).

Rich TA, Feng L, Busaidy N, et al. Prevalence by age and predictors of medullary thyroid cancer in patients with lower risk germline RET proto-oncogene mutations. *Thyroid* 24(7):1096-106 (2014).

Sridhara SK, Yener M, Hanna EY, **Rich T**, et al. Genetic testing in head and neck paraganglioma: who, what, and why? *J Neurol Surg B Skull Base* 74(4):236-40 (2014).

Abadin SS, Ayala-Ramirez M, Jimenez C, Dickson PV, Liang Y, Lazar AJ, Hornick JL, Cotton M, Sui D, **Rich T**, et al. Impact of surgical resection for subdiaphragmatic paragangliomas. *World J Surgery* 38(3):733-41 (2014).

Pilarski R, Cebulla CM, Massengill JB, Rai K, **Rich T**, et al. Expanding the clinical phenotype of hereditary BAP1 cancer predisposition syndrome, reporting three new cases. *Genes Chromosomes Cancer* 53(2):177-82 (2014).

Rich TA, Liu M, Etzel CJ, et al. Comparison of attitudes regarding preimplantation genetic diagnosis among patients with hereditary cancer syndromes. *Fam Cancer* 13(2):291-9 (2014).

Williams MD, **Rich TA**. Paragangliomas Arising in the Head and Neck: A Morphologic Review and Genetic Update. *Surg Pathol Clin* 7(4):543-57 (2014).

Thosani S, Ayala-Ramirez M, Palmer L, Hu MI, **Rich T**, et al. The characterization of pheochromocytoma and its impact on overall survival in multiple endocrine neoplasia type 2. *J Clin Endocrinol Metab* 98(11):E1813-9 (2013).

Jimenez C, Rohren E, Habra MA, **Rich T**, et al. Current and future treatments for malignant pheochromocytoma and sympathetic paraganglioma. *Curr Oncol Rep* 15(4):356-71 (2013).

Grubbs EG, **Rich TA**, Ng C, Bhosale PR, Jimenez C, Evans DB, Lee JE, Perrier ND. Long-term outcomes of surgical treatment for hereditary pheochromocytoma. *J Am Coll Surg* 216(2):280-9 (2013).

Morris LF, Waguespack SG, Edeiken-Monroe BS, Lee JE, **Rich TA**, et al. Ultrasonography should not guide the timing of thyroidectomy in pediatric patients diagnosed with multiple endocrine neoplasia syndrome 2A through genetic screening. *Ann Surg Oncol* 20(1):53-9 (2013).

Daniels MS, **Rich T**, Weissman S, Pilarski R. Lifetime cancer risks of PTEN mutation carriers--letter. *Clin Cancer Res*. 18(15):4213 (2012); author reply 4214.

Landry CS, **Rich TA**, Jimenez C et al. Multiple Endocrine Neoplasia. In: Yao J., Hoff P., Hoff A. (eds) Neuroendocrine Tumors. Current Clinical Oncology. Humana Press (2011).

Dickson PV, **Rich TA**, Xing Y, et al. Achieving eugastrinemia in MEN1 patients: both duodenal inspection and formal lymph node dissection are important. *Surgery* 150(6):1143-52 (2011).

Ayala-Ramirez M, Feng L, Habra MA, **Rich T** et al. Clinical benefits of systemic chemotherapy for patients with metastatic pheochromocytomas or sympathetic extra-adrenal paragangliomas: insights from the largest single-institutional experience. *Cancer* 118(11):2804-12 (2012).

Peck BW, **Rich TA**, Jimenez C, Kupferman ME. A novel SDHB mutation associated with hereditary head and neck paraganglioma. *Laryngoscope* 121(12):2572-5 (2011).

Waguespack SG, **Rich TA**, Perrier ND, et al. Management of medullary thyroid carcinoma and MEN2 syndromes in childhood. *Nat Rev Endocrinol* 23;7(10):596-607 (2011).

Varghese J, **Rich T**, Jimenez C. Benign familial hypocalciuric hypercalcemia. *Endocr Pract* 17 Suppl 1:13-7 (2011).

Varghese J, Ayala-Ramirez M, **Rich T**, et al. Novel germline SDHD mutation: diagnosis and implications to the patient. *Fam Cancer* 10(2):365-71 (2011).

Ayala-Ramirez M, Feng L, Johnson MM, Ejaz S, Habra MA, **Rich T**, et al. Clinical risk factors for malignancy and overall survival in patients with pheochromocytomas and sympathetic paragangliomas: primary tumor size and primary tumor location as prognostic indicators. *J Clin Endocrinol Metab* 96(3):717-25 (2011).

Jasim S, Ying AK, Waguespack SG, **Rich TA**, et al. Multiple endocrine neoplasia type 2B with a RET proto-oncogene A883F mutation displays a more indolent form of medullary thyroid carcinoma compared with a RET M918T mutation. *Thyroid* 21(2):189-92 (2011).

Grubbs EG, Waguespack SG, **Rich TA**, et al. Do the recent American Thyroid Association (ATA) Guidelines accurately guide the timing of prophylactic thyroidectomy in MEN2A? *Surgery* 148(6):1302-9; discussion 1309-10 (2010).

Ayala-Ramirez M, Habra MA, Busaidy N, Cote G, **Rich T**, et al. A catecholamine crisis on Mount Kilimanjaro: a hypoxia effect? *J Travel Med* 17(6):424-6 (2010).

Habra MA, Núñez R, Chuang H, Ayala-Ramirez M, **Rich T**, et al. Fatal hypoglycemia in malignant pheochromocytoma: direct glucose consumption as suggested by (18)F-2-fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography imaging. *Endocrine* 37(1):209-12 (2010).

Waguespack SG, **Rich TA**. Multiple endocrine neoplasia syndrome type 2B in early childhood: long-term benefit of prophylactic thyroidectomy. *Cancer* 116(9):2284 (2010).

Ayala-Ramirez M, Callender GG, Kupferman ME, **Rich TA**, et al. Paraganglioma syndrome type 1 in a patient with Carney-Stratakis syndrome. *Nat Rev Endocrinol* 6(2):110-5 (2010).

Rich TA, Salazar M. Genetic risk assessment, counseling and testing. *Surg Oncol Clin N Am* 18(1):19-38, vii (2009).

Jimenez C, Cabanillas ME, Santarpia L, Jonasch E, Kyle KL, Lano EA, Matin SF, Nunez RF, Perrier ND, Phan A, **Rich TA**, et al. Use of the tyrosine kinase inhibitor sunitinib in a patient with von Hippel-Lindau disease:

targeting angiogenic factors in pheochromocytoma and other von Hippel-Lindau disease-related tumors. *J Clin Endocrinol Metab* 94(2):386-91 (2009).

Callender GG, **Rich TA**, Perrier ND. Multiple endocrine neoplasia syndromes. *Surg Clin North Am* 88(4):863-95, viii (2008).

Rich TA & Perrier ND. Risk assessment and genetic counseling for multiple endocrine neoplasia type 1 (MEN1). *Community Oncology*, 5(9):502-510 (2008).

Rich TA, Jonasch E, Matin S, et al. A novel von Hippel-Lindau point mutation presents as apparently sporadic pheochromocytoma. *Cancer Invest* 26(6):642-6 (2008).

Grubbs EG, **Rich TA**, Li G, et al. Recent advances in thyroid cancer. *Curr Probl Surg* 45(3):156-250 (2008).

Grubbs EG, **Rich TA**, Li G, et al. Recent advances in thyroid cancer. In brief. *Curr Probl Surg* 45(3):149-51 (2008).

Wray CJ, **Rich TA**, Waguespack SG, et al. Failure to recognize multiple endocrine neoplasia 2B: more common than we think? *Ann Surg Oncol* 15(1):293-301 (2008).

Evans DB, **Rich TA**, Cote GJ. Surgical management of familial hyperparathyroidism. *Ann Surg Oncol* 14(5):1525-7 (2007).

Presented Abstracts

Where are we today? Efforts to understand strategies and barriers to physician issuance of a recommendation for colorectal cancer screening: A systematic review (lead author, oral poster presentation at the annual Digestive Disease Week conference, Chicago, IL, 2020)

Cell-free circulating tumor DNA (ctDNA) detection in early stage colorectal cancer (lead author, poster presented at the Early Detection Research Network annual meeting, Bethesda, MD, 2019)

Cell-free DNA (cfDNA) analysis of *ESR1* mutant advanced breast cancer: Impact of subsequent therapy on mutation persistence (co-author, poster presented by Ms. Caroline Weipert at the annual San Antonio Breast Cancer Conference, San Antonio TX, 2019)

Duration of targeted therapy (co-author, poster presented by Dr. Christina Baik at the World Conference on Lung Cancer Annual Meeting, Barcelona, Spain, 2019)

Association between gene fusions and anti-EGFR resistance signature in colorectal cancer (lead author, poster presented at the ASCO Annual Meeting, Chicago, IL 2019)

Comprehensive genomic profiling of circulating cell-free DNA (cfDNA) distinguishes focal amplification (amp) from aneuploidy among *MET* amps in diverse advanced cancer types (co-author, poster presented by Dr. Yuichi Kumaki at the ASCO Annual Meeting, Chicago, IL 2019)

Profiling of genomic alterations in MAPK/ERK signaling in a large cohort of metastatic prostate cancer (mPC) patients (co-author, poster presented by Dr. Edwin Lin at the ASCO Annual Meeting, Chicago, IL 2019)

Discovery of targetable mutational signatures in advanced prostate cancer using machine learning and next-generation sequencing of circulating tumor DNA (co-author, poster presented by Dr. Edwin Lin at the ASCO GU Annual Meeting, San Francisco, CA, 2019)

Mutational landscape of BRAF V600E positive lung cancer patients following BRAF directed therapy (co-author, poster presented by Dr. Anastasios Dimou at the World Conference on Lung Cancer, Toronto Canada, 2018)

Analysis of cell-free DNA from 32,991 advanced cancers reveals novel co-occurring activating *RET* alterations and oncogenic signaling pathway aberrations (co-lead author, oral presentation at AACR by Dr. Karen Reckamp, Chicago, IL, 2018)

Landscape of *BRCA1* and *BRCA2* germline, somatic, and reversion alterations detectable by cell-free DNA testing among patients with metastatic breast, ovarian, pancreatic, or prostate cancer (co-author, poster presented by Dr. Aditya Bardia, ASCO annual, Chicago, IL 2018)

RET rearrangements may arise following anti-EGFR therapy in advanced colorectal cancer (lead author, poster presented at ESMO annual, Munich Germany, 2018)

Circulating cell-free DNA molecular profiling among East Asian patients reveals activating *MET* alterations are common in diverse advanced cancer types (co-author, poster presented at ESMO Asia, Singapore, 2018)

Cell free DNA analysis identified actionable *ERBB2* amplifications in patients with HER2-equivocal breast cancer (lead author, poster presented at San Antonio Breast Cancer Conference, San Antonio TX, 2018)

Evaluating preclinical efficacy of anti-HER2 drug combinations using ER+/HER2 mutant Models (co-author, poster presented at San Antonio Breast Cancer Conference, San Antonio TX, 2018)

Characterization of *TP53* mutations Identified Using a 25-Gene Hereditary Cancer Panel (lead author, podium presentation by Thereasa Rich at the San Antonio Breast Cancer Symposium, San Antonio, TX 2015)

Selective parafibromin staining is an effective tool in evaluating young non-MEN1 patients with primary hyperparathyroidism for *CDC73* mutations (co-author, poster presented by Dr. Ashley Cayo at the 14th International workshop on multiple endocrine neoplasia and other rare endocrine tumors, Vienna Austria 2014)

Preliminary whole-exome sequencing reveals mutations that imply common tumorigenicity pathways in multiple endocrine neoplasia type 1 patients (co-author, platform presentation by Dr. Minerva Romero Arenas at the American Association of Endocrine Surgeons [AAES] annual meeting, Boston MA 2014)

Age of onset and predictors of medullary thyroid cancer in patients with lower risk *RET* proto-oncogene mutations (lead author, podium presentation by Thereasa Rich, at the National Society of Genetic Counselors annual education conference [NSGC AEC], Boston MA 2012)

Attitudes About Predictive *MEN1* Genetic Testing in Minors (thesis advisor, poster presented by Katherine Rock at the NSGC AEC, Boston, MA 2012)

Attitudes Regarding Preimplantation Genetic Diagnosis (PGD) Among Patients with Hereditary Cancer Syndromes (lead author, podium presentation by Thereasa Rich at the NSGC AEC, San Diego, CA 2011)

Achieving eugastrinemia in MEN1 patients: both duodenal inspection and formal lymph node dissection are important (co-author, podium presentation by Dr. Paxton Dickson at the AAES annual meeting, Houston, TX 2011).

Do the recent American Thyroid Association (ATA) Guidelines accurately guide the timing of prophylactic thyroidectomy in MEN2A (co-author, podium presentation by Dr. Elizabeth Grubbs at the AAES annual meeting, Pittsburgh, PA 2010).

Tumor Surveillance Attitudes and Behaviors in Patients with MEN (lead author, poster presented by Thereasa Rich, 11th International workshop on multiple endocrine neoplasia, Delphi, Greece 2008)

Failure to recognize Multiple Endocrine Neoplasia 2B: more common than we think? (co-author, podium presentation by Dr. Curtis Wray at the Society of Surgical Oncology Annual Cancer Symposium, Washington, DC 2007)

Transitions to Adulthood in Individuals with FAP (lead author, podium presentation by Thereasa Rich at the NSGC AEC, Nashville, TN, 2006)